

PATENT SPECIFICATION

1,019,430

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COMPLETE SPECIFICATION

DRAWINGS ATTACHED

Gun Mounting

WE, KELLER & KNAPPICH G.m.b.H., of 74 Ulmerstrasse, Augsburg, Germany; a German body corporate, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention concerns a rotatable gun mounting for quick firing guns on armoured vehicles, a rotatable platform of which, mounted outside the armoured interior of the vehicle, supports two trunnion plates between which the gun, enclosed by an armoured housing, is mounted so as to be vertically pivotal about trunnion bearings.

In a known embodiment of this kind the armoured housing surrounding the gun is constructed as a cylindrical ring, in the centre of which the gun is retained by means of long supports and is mounted by means of trunnions on cradle supports which are provided in lateral trunnion plates. It is, however, necessary for such a protective housing ring to have a diameter corresponding to the length of gun to be mounted, thus causing unuseable cavities to occur therein. The associated lateral trunnion plates have to be kept correspondingly large and hence present an unfavourably large target. To seal the annular gap between the protective housing ring and the lateral trunnion plates against ABC warfare agents requires accordingly large packing rings, the efficiency of which is hence impeded.

It is the object of this invention to remove the above mentioned deficiencies and disadvantages of known rotatable gun mountings.

According to the present invention, such a gun mounting is characterised by the feature that the armoured housing closely surrounds the gun on all sides and supports

the gun in a cradle, the trunnion bearings extending from the housing being of open-ended hollow construction to allow ammunition to be fed therethrough to the gun, the trunnion plates supporting the trunnion bearings being arranged to cover the open ends of the trunnion bearings whilst maintaining sufficient space to permit the passage of ammunition from below the rotatable platform to the hollow trunnion bearings. The annular gaps to be sealed by packing rings thereon become much smaller and are readily sealed. This sealing is effective also against the penetration into the armoured vehicle space of gasses released on firing. The ammunition belt feed may moreover be effected from the armoured vehicle space through an opening in the platform, so that the ammunition stock is constantly surveyable. The side plates situated on the platform need only be of a size sufficient to cover the trunnion openings. The trunnion mounting is very stable owing to its size, the invention thus achieving a large number of advantages.

The invention will now be described further, by way of example, with reference to the accompanying drawings, in which:—

Fig. 1 is a sectional elevation at right angles to the barrel of a weapon mounted in accordance with the invention; and

Fig. 2 is a vertical view thereof, shown partly in section.

As shown in the drawings, a small turnable 1 has a rotatable platform 2 mounted thereon, on which is erected a bifurcated trunnion plate 3 of armoured material. Between its faces mounted so as to be rotatable about a horizontal axis is the so-called upper gun mounting 4. In this upper gun mounting 4 the gun 5 is so mounted that its bore axis intersects the axis of vertical rotation A-B of the vertical

[Price . . .]

sighting movement. This arrangement of the gun relative to the trunnion plates 3 makes it possible for ammunition to be fed from the interior of the vehicle by means of 5 suitable guide members 6 through the rotatable platform 2 and also through a hollow trunnion bearing 7 to the gun 5, which is mounted in a cradle 8 enclosed in an armoured housing 22 which forms part 10 of the upper gun mounting 4. Between the trunnion plates 3, which are not vertically swivelable, and the vertically displaceable housing 22 together with the cradle 8 and gun 5 there are provided packings 9, preferably in the form of rings for satisfactory 15 sealing.

The gunner in the interior of the vehicle sights vertically by means of a hand wheel 10 via a gearing 11. This device is disposed 20 within the armoured enclosure, just as are all other transmitting elements, traction rods etc. necessary for actuating the weapon. Lateral sighting is effected in a conventional manner by means of a gearing 12 which 25 operates on the fixed toothing 13 of the turntable 1.

Grouped around an upright 14 which is suspended below the rotatable platform 2 and which accommodates the gearing, are 30 the gunner's seat 15 with back-rest 16 and foot support 17. The lower part of the upright 14 is bifurcated to form a portal in which an ammunition box 18 is mounted and adapted to be pulled out on a roller

track (not shown). The sighting lens 19 is 35 so mounted that its objective lens 20 is disposed below the gun, the viewing lens (ocular) 21 being disposed in front of the upright 14.

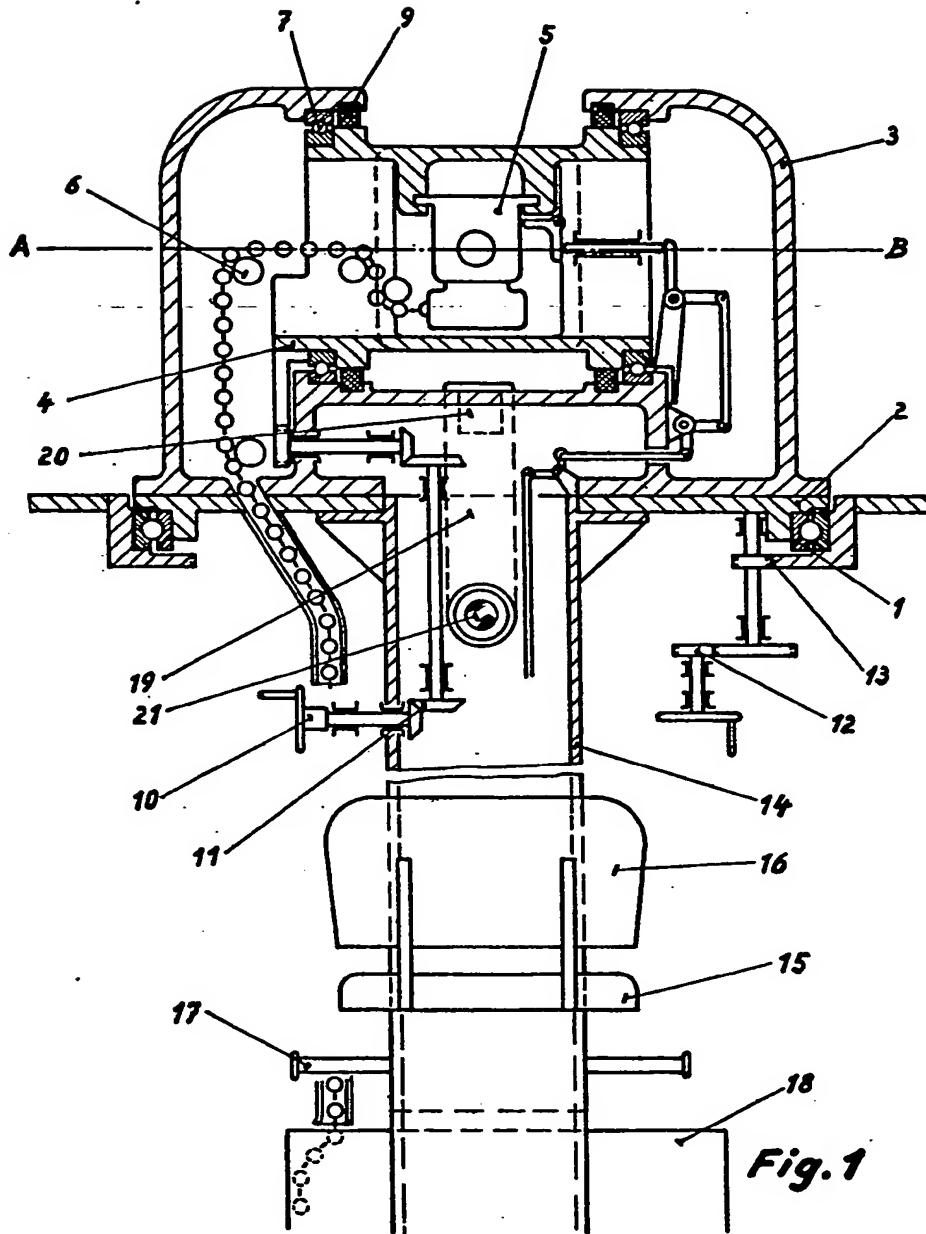
WHAT WE CLAIM IS:—

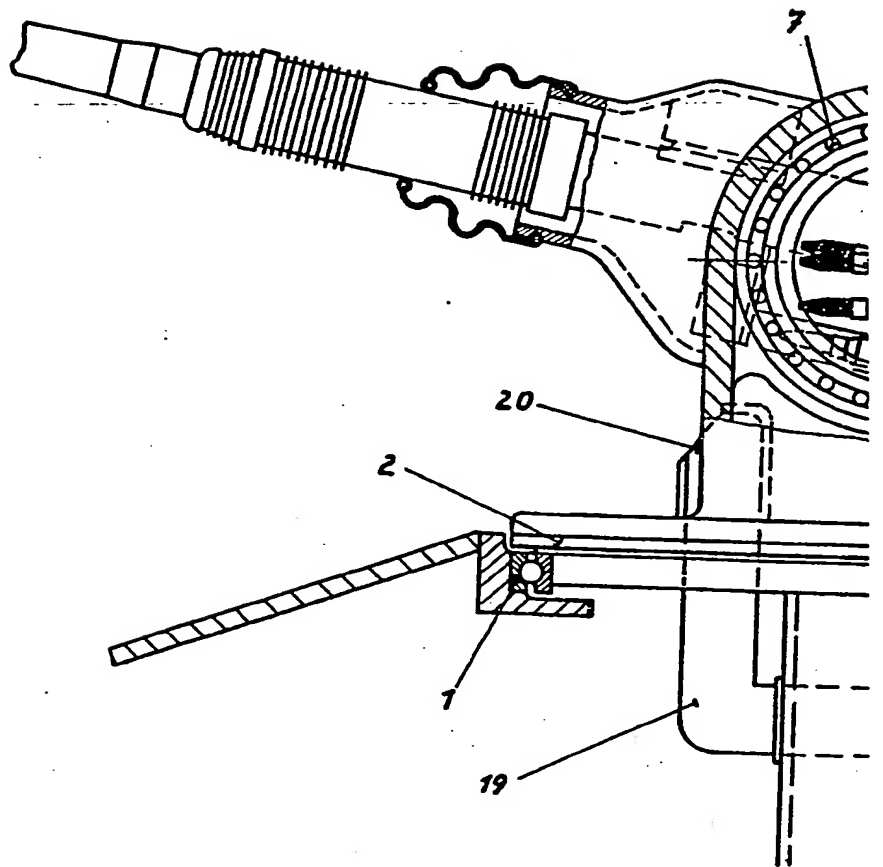
1. A rotatable gun mounting for quick 40 firing guns on armoured vehicles, comprising a rotatable platform supporting two trunnion plates outside the armoured interior of the vehicle, the gun, enclosed by 45 an armoured housing, being mounted between the trunnion plates by means of trunnion bearings so as to be vertically pivotal thereabout, characterised by the feature that the armoured housing closely 50 surrounds the gun on all sides and supports the gun in a cradle, the trunnion bearings extending from the housing being of open-ended hollow construction to allow 55 ammunition to be fed therethrough to the gun, the trunnion plates supporting the trunnion bearings being arranged to cover the open ends of the trunnion bearings whilst maintaining sufficient space to permit the passage of ammunition from below the 60 rotatable platform to the hollow trunnion bearings.

2. A rotatable gun mounting constructed and arranged to operate substantially as herein described with reference to and as 65 illustrated in the accompanying drawings.

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 the Original on a reduced scale.
 SHEET 1





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SHEET 2

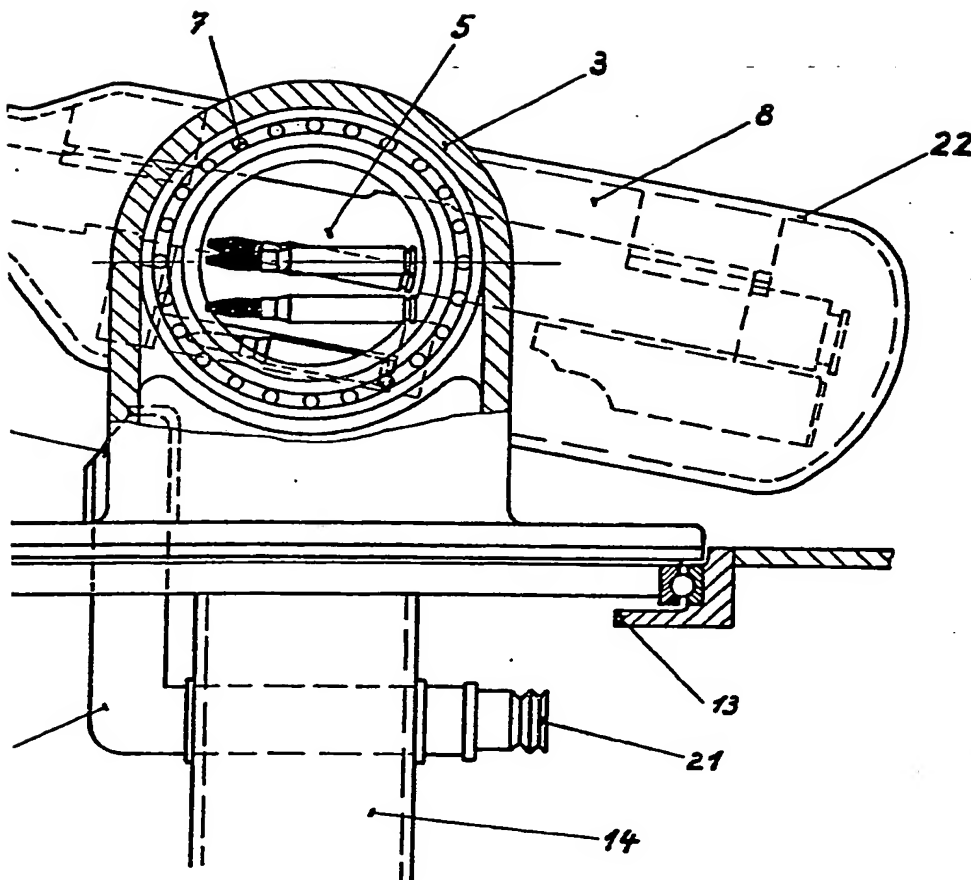


Fig. 2

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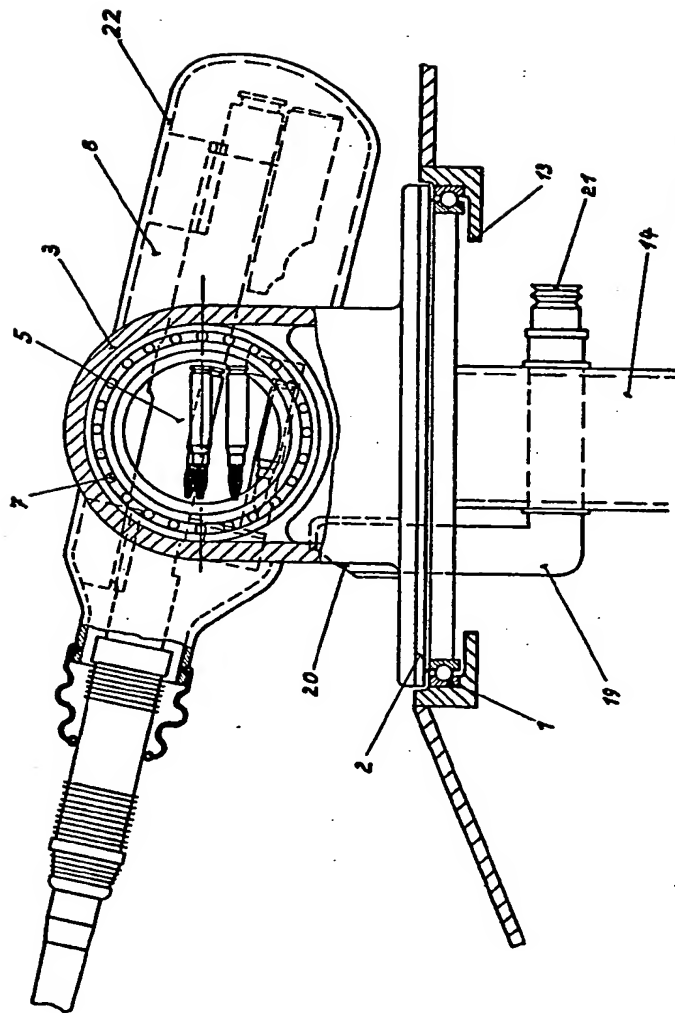


Fig. 2

